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09/930,159

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Hitoshi Iwasaka

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EXAMINER

RINEHART, KENNETH

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 12/10/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,159

Applicant(s)

IWASAKA ET AL.

Examiner

Kenneth B Rinehart

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-- **Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-14,28-32 and 38-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-54 is/are allowed.
- 6) ☒ Claim(s) 1,5,6,10-14,28,29 and 38-48 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 45-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 45, 48, 49, the phrase "hole-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 10, 14, 38, 39, 40, 41, 42, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al (6402843). Siniaguine et al discloses a body (1, fig. 1) having an end face that opposes an object to be conveyed, and at least one concave opening (4, fig. 1) formed in the end face and surrounded by a cylindrical inner wall, a fluid passageway having a ... of spouts to introduce fluid into an inner space of the concave opening in a circumferential direction of the cylindrical inner sidewall so as to cause a swirl of fluid within the concave opening, the ... of spouts being formed on the inner cylindrical inner sidewall (2,

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fig. 1, fig. 2), a base (15, fig. 4), a plurality of fluid swirl formation objects which are provided at the base (16, fig. 1), wherein each of the plurality of fluid swirl formation objects comprises a body having an end face that opposes an object to be conveyed (fig. 1a, fig. 4), and a concave opening formed in the end face and surrounded by a cylindrical inner side wall (fig. 1), and a fluid passage way having a ... of spouts to introduce fluid into an inner space of the concave opening in a circumferential direction of the cylindrical inner side wall so as to cause a swirl of fluid within the concave opening, the ... of spouts being formed on the cylindrical inner side wall (2, fig. 1), at least one fluid discharge passage provided in the base to expel fluid supplied through the ... of spouts of the plurality of fluid swirl formation objects (fig. 6A), the concave opening is in a tapered shape (fig. 1a). Siniaguine et al discloses applicant's invention substantially as claimed with the exception of plurality, the plurality of spouts are plural pairs of spouts, and each of the plural pairs of spouts is formed on the cylindrical inner side wall symmetrically to a central axis of the concave opening, the end face comprises a chamfered edge, the plurality of fluid swirl formation objects are provided at the base in such a way that each of the plurality of fluid swirl formation objects extend from the base. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have a plurality of spouts, the plurality of spouts are plural pairs of spouts, and each of the plural pairs of spouts is formed on the cylindrical inner side wall symmetrically to a central axis of the concave opening, the end face comprises a chamfered edge, the plurality of fluid swirl formation objects are provided at the base in such a way that each of the plurality of fluid swirl formation objects extend from the base because Applicant has not disclosed that the number of spouts or location of the spouts, or shape of the end face, or

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shifting the location of a part provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the spout of Siniaguine or the claimed plurality of spouts, locations, and shapes and location of parts because both quantities, locations of spouts, and shape, and location of parts perform the same function of conveying equally well.

Claim 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al (6402843) as applied to claim 1 above, and further in view of Siniaguine et al (6099056). Siniaguine et al (6402843) discloses applicant's invention substantially as claimed with the exception of a centering guide to maintain a position of the object to be conveyed such that the object opposes the end face, the noncontacting conveyance equipment has an outer periphery, and the centering guide comprises at least three centering protrusions provided around the outer periphery. Siniaguine et al (6099056) teaches centering guide to maintain a position of the object to be conveyed (fig. 1b), the noncontacting conveyance equipment has an outer periphery (fig. 1b), and the centering guide comprises at least three centering protrusions provided around the outer periphery (13, fig. 8, col. 7, lines 8-11) such that the object opposes the end face for the purpose of preventing damage to the object being conveyed. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al (6402843) by including centering guide to maintain a position of the object to be conveyed such that the object opposes the end face, the noncontacting conveyance equipment has an outer periphery, and the centering guide comprises at least three centering protrusions provided around the outer periphery as taught by Siniaguine

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for the purpose of preventing damage to the object being conveyed so that operating and production costs are reduced.

Claims 11, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al (6402843) as applied to claim 10 above, and further in view of Siniaguine et al (6099056). Siniaguine et al (6402843) discloses applicant's invention substantially as claimed with the exception of fluid swirls clockwise in at least one of the plurality of fluid swirl formation objects, and fluid swirls counter clockwise in at least one of the plurality of fluid swirl formation objects, the base is surrounded with a peripheral edge to block a flow of fluid from the base, the peripheral edge has a stepped shape. Siniaguine et al (6099056) teaches fluid swirls clockwise in at least one of the plurality of fluid swirl formation objects, and fluid swirls counter clockwise in at least one of the plurality of fluid swirl formation objects (fig. 5) for the purpose of allowing the rotational vortexes on the article to cancel and the article does not rotate relative to the facing surface. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al by including fluid swirls clockwise in at least one of the plurality of fluid swirl formation objects, and fluid swirls counter clockwise in at least one of the plurality of fluid swirl formation objects as taught by Siniaguine et al for the purpose of preventing rotation to preserve the orientation of the object being transported for placement. Siniaguine et al (6099056) teaches the base is surrounded with a peripheral edge to block a flow of fluid from the base (13, fig. 1B) for the purpose of retaining the object adjacent to the facing surface. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al by including the base is surrounded with a peripheral edge to block a flow of fluid from the base as taught by Siniaguine et al (6099056) for the purpose of retaining the object adjacent to the facing surface so that the object

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is not damaged. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have stepped shape because Applicant has not disclosed that the shape of the edge provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the shape of Siniaguine or the claimed shape because both shapes perform the same function of preventing damage to the object equally well.

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siniaguine et al as applied to claim 10 above, and further in view of Olsson et al. Siniaguine et al (6402843) discloses the non contacting conveyance equipment has an outer periphery (fig. 2). Siniaguine et al (6402843) discloses applicant's invention substantially as claimed with the exception of a centering guide to maintain a position of the object to be conveyed such that the object opposes the end face, the centering guide comprises at least three centering protrusions provided around the outer periphery. Olsson et al teaches a centering guide to maintain the object to be conveyed such that the object opposes the end face (33, fig. 3), the centering guide comprises at least three centering protrusions provided around the outer periphery (fig. 3) for the purpose of preventing damage to the object as it may move laterally across the surface. It would have been obvious to one of ordinary skill in the art to modify Siniaguine et al by including a centering guide to maintain the object to be conveyed such that the object opposes the end face, the centering guide comprises at least three centering protrusions provided around the outer periphery as taught by Siniaguine et al for the purpose of preventing damage to the object being conveyed and thus reducing transportation costs.

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Allowable Subject Matter

Claims 49-54 are allowed.

Claims 45-48 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 7-9, 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

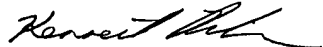
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 703-308-1722. The examiner can normally be reached on 7:30-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

KBR



Kenneth Rinehart

Patent Examiner

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